REMARKS

The present amendment is submitted in order to correct the form of several allowed claims.

First, claims 4, 17, 30, 47, 54 and 59 are amended to delete the last two monomers recited in each claim. That is being requested because each of those claims depends from a claim (claims 3, 16, 29, 45, 52 and 57, respectively) that specifies that the monomer "comprises an N-(*o*-boronobenzyl)aminomethyl-anthracene derivative." Upon review of the allowed claims, it was realized that the last two monomers recited in the claims noted above may not be N-(*o*-boronobenzyl)aminomethylanthracene derivatives. Thus, in order to assure proper claim form, those monomers are canceled from claims 4, 17, 30, 47, 54 and 59, and re-presented in new claims 60-65, which have the proper dependency.

Second, claims 36 and 37 are requested to be amended to be consistent in scope with claims 10 and 11, and 23 and 24.

The foregoing amendments require no additional search or examination. If the amendment is entered, claims 4, 17, 30, 47, 54, and 59-65 will be of the same scope as the current claims. Moreover, the list of analytes recited in amended claim 36 is the same as in claims 10 and 23. Moreover, the claims amended and added herein are patentable because they are of the same scope as previously-allowed claims. The amendment was not presented

earlier because the formal matters sought to be corrected were discovered subsequent to the mailing of the Notice of Allowance.

Entry of the present amendment is respectfully requested.

Respectfully submitted,

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2232-146

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	
	)	
A.E. COLVIN, Jr.	)	
	)	
Serial No. 09/920,627	)	Examiner: M. Cole
	)	
Filed: August 3, 2001	)	Group Art Unit: 1743
	)	

For: DETECTION OF ANALYTES IN AQUEOUS ENVIRONMENTS

RULE 312 AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please amend the above-identified application as follows:

GR

AMENDMENTS TO THE CLAIMS

Pl ase amend the claims as indicated below. Material inserted is indicated by underlining and material deleted is indicated by strikethrough.

1. (Original) An indicator macromolecule for detecting the presence or concentration of an analyte in an aqueous environment, said macromolecule comprising a copolymer of:

a) one or more indicator component monomers which individually are not sufficiently water soluble to permit their use in an aqueous environment for detecting the presence or concentration of said analyte; and

b) one or more hydrophilic monomers;

such that the macromolecule is capable of detecting the presence or concentration of said analyte in an aqueous environment.

2. (Original) The indicator macromolecule of claim 1, wherein the macromolecule is capable of detection by an optical change.

3. (Original) The indicator macromolecule of claim 1, wherein the indicator component monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative.

4. (Currently amended): The indicator macromolecule of claim 3, wherein the indicator component monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-[2-boronobenzyl)]-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;~~

and salts or derivatives thereof.

5. (Original) The indicator macromolecule of claim 3, wherein the hydrophilic monomer comprises [3-(methacryloylamino)-propyl]trimethylammonium chloride.

6. (Original) The indicator macromolecule of claim 1, wherein the indicator component monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

7. (Original) The indicator macromolecule of claim 1, wherein the molar ratio of hydrophilic monomer:indicator component momomer is from about 2:1 to about 1000:1.

8. (Original) The indicator macromolecul of claim 7, wherein the ratio of hydrophilic monomer:indicator component momomer is from about 5:1 to about 50:1.

9. (Original) The indicator macromolecule of claim 8, wherein the ratio of hydrophilic monomer:indicator component momomer is about 5:1.

10. (Original) The indicator macromolecule of claim 1, wherein the analyte detected is selected from the group consisting of a vicinal diol; an α-hydroxy acid, a β-keto acid oxygen; carbon dioxide; zinc, potassium, hydrogen, or carbonate ions; a toxin; a mineral; and a hormone.

11. (Original) The indicator macromolecule of claim 10, wherein the analyte detected is a vicinal diol which comprises a saccharide.

12. (Original) The indicator macromolecule of claim 11, wherein the saccharide is glucose.

13. (Original) The indicator macromolecule of claim 1, wherein

i) the molar ratio of hydrophilic monomer:indicator component momom r is from about 2:1 to about 15:1,

ii) the indicator component monomer comprises an N-(o-boronobenzyl)amino]methyl]anthracene derivative,

iii) the hydrophilic monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride, and

iv) the macromolecule exhibits an excimer effect.

14. (Original) A method for the production of an indicator macromolecule for detecting the presence or concentration of an analyte in an aqueous environment, said method comprising copolymerizing:

a) one or more indicator component monomers which individually are not sufficiently water soluble to permit their use in an aqueous environment for detecting the presence or concentration of said analyte; and

b) one or more hydrophilic monomers;

such that the resulting macromolecule is capable of detecting the presence or concentration of said analyte in an aqueous environment.

15. (Original) The method of claim 14, wherein the macromolecule is capable of detection by an optical change.

16. (Original) The method of claim 14, wherein the indicator component monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative.

17. (Currently amended): The method of claim 16, wherein the indicator component monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-[2-boronobenzyl)]-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracen ;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide,~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene,~~

and salts or derivatives thereof.

18. (Original) The method of claim 14, wherein the hydrophilic monomer comprises [3-(methacryloylamino)-propyl]trimethylammonium chloride.

19. (Original) The method of claim 14, wherein the indicator component monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

20. (Original) The method of claim 14, wherein the molar ratio of hydrophilic monomer:indicator component momomer is from about 2:1 to about 1000:1.

21. (Original) The method of claim 20, wherein the ratio of hydrophilic monomer:indicator component momomer is from about 5:1 to about 50:1.

22. (Original) The method of claim 21, wherein the ratio of hydrophilic monomer:indicator component momomer is about 5:1.

23. (Original) The method of claim 14, wherein the analyte detected is selected from the group consisting of a vicinal diol; an α-hydroxy acid; a β-keto acid; oxygen; carbon dioxide; zinc, potassium, hydrogen, or carbonate ions; a toxin; a mineral; and a hormone.

24. (Original) The method of claim 23, wherein the analyte detected is a vicinal diol which comprises a saccharide.

25. (Original) The method of claim 24, wherein the saccharide is glucose.

26. (Original) The method of claim 14, wherein

i) the molar ratio of hydrophilic monomer:indicator component momomer is from about 2:1 to about 15:1,

ii) the indicator component monomer comprises an N-(o-boronobenzyl)aminomethylanthracene derivative,

iii) the hydrophilic monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride, and

iv) the macromolecule exhibits an excimer effect.

27. (Original) A method for detecting the presence or concentration of an analyte in a sample having an aqueous environment, said method comprising:

a) exposing the sample to an indicator macromolecule, said macromolecule comprising a copolymer of:

i) one or more indicator component monomers which individually are not sufficiently water soluble to permit their use in an aqueous environment for detecting the presence or concentration of said analyte; and

ii) one or more hydrophilic monomers;

such that the resulting macromolecule is capable of detecting the presence or concentration of said analyte in an aqueous environment, and wherein the indicator macromolecule has a

detectable quality that changes in a concentration-dependent manner when said macromolecule is exposed to said analyte; and

b) measuring any change in said detectable quality to thereby determine the presence or concentration of said analyte in said sample.

28. (Original) The method of claim 27, wherein the change in said detectable quality is an optical change.

29. (Original) The method of claim 27, wherein the indicator component monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative.

30. (Currently amended): The method of claim 29, wherein the indicator component monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methylanthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-[2-boronobenzyl)]-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;~~

and salts or derivatives thereof.

31. (Original) Th method of claim 27, wherein the hydrophilic monomer compris s [3-(methacryloylamino)-propyl]trimethylammonium chloride.

32. (Original) The method of claim 27, wherein the indicator component monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

33. (Original) The method of claim 27 wherein the molar ratio of hydrophilic monomer:indicator component momomer is from about 2:1 to about 1000:1.

34. (Original) The method of claim 33, wherein the ratio of hydrophilic monomer:indicator component momomer is from about 5:1 to about 50:1.

35. (Original) The method of claim 34 wherein the ratio of hydrophilic monomer:indicator component momomer is about 5:1.

36. (Currently amended) The method of claim 27, wherein the analyte detected is selected from the group consisting of a vicinal diol; an α-hydroxy acid; a β-keto acid;

~~saccharide~~; oxygen; carbon dioxide; ~~and~~ zinc, potassium, hydrogen, or carbonate ions; a toxin; a mineral; and a hormone.

37. (Currently amended) The method of claim 36, wherein the analyte detected is a vicinal diol which comprises a saccharide.

38. (Original) The method of claim 37, wherein the saccharide is glucose.

39. (Original) The method of claim 27, wherein

i) the molar ratio of hydrophilic monomer:indicator component momomer is from about 2:1 to about 15:1,

ii) the indicator component monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative,

iii) the hydrophilic monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride, and

iv) the macromolecule exhibits an excimer effect.

40. (Original) The method of claim 39, wherein said macromolecule serves as both an indicator and a reference.

41. (Original) A macromolecule which is capable of exhibiting an excimer effect, which comprises a copolymer of:

a) one or more xcimer forming monomers, the molecules of which are capable of exhibiting an excimer effect when suitably oriented with respect to each other; and

b) one or more other monomers;

such that the resulting macromolecule exhibits said excimer effect.

42. (Original) The macromolecule of claim 41, wherein the macromolecule is capable of detecting the presence or concentration of an analyte.

43. (Original) The macromolecule of claim 42, wherein

a) the excimer forming monomer individually is not sufficiently water soluble to permit its use in an aqueous environment for detecting the presence or concentration of said analyte; and

b) the other monomer is a hydrophilic monomer;

such that the macromolecule is capable of detecting the presence or concentration of said analyte in an aqueous environment.

44. (Original) The macromolecule of claim 42, wherein the excimer effect does not substantially change in response to changes in the presence or concentration of the analyte.

45. (Original) The macromolecule of claim 44, wherein

i) the molar ratio of other monomer:excimer forming momomer is from about 2:1 to about 15:1,

ii) the excimer forming monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative, and

iii) the other monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride.

46. (Original) The macromolecule of claim 41, wherein the excimer forming monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

47. (Currently amended): The macromolecule of claim 45, wherein the excimer forming monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronbenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methylanthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide,~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene,~~

and salts or derivatives thereof.

48. (Original) A method for producing a macromolecule which is capable of exhibiting an excimer effect, which method comprises copolym rizing:

a) one or more excimer forming monomers, the molecules of which are capable of exhibiting an excimer effect when suitably oriented with respect to each other; and

b) one or more other monomers;

such that the resulting macromolecule exhibits said excimer effect.

49. (Original) The method of claim 48, wherein the macromolecule is capable of detecting the presence or concentration of an analyte.

50. (Original) The method of claim 49, wherein

a) the excimer forming monomer individually is not sufficiently water soluble to permit its use in an aqueous environment for detecting the presence or concentration of said analyte; and

b) the other monomer is a hydrophilic monomer;

such that the macromolecule is capable of detecting the presence or concentration of said analyte in an aqueous environment.

51. (Original) The method of claim 49, wherein the excimer effect does not substantially change in response to changes in the presence or concentration of the analyte.

52. (Original) The method of claim 51, wherein

i) the molar ratio of other monomer:excimer forming momomer is from about 2:1 to about 15:1,

ii) the excimer forming monomer comprises an N-(*o*-boronobenzyl)aminomethylanthracene derivative, and

iii) the other monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride.

53. (Original) The method of claim 48, wherein the excimer forming monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

54. (Currently amended): The method of claim 52, wherein the excimer forming monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-

[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]-anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene,~~

and salts or derivatives thereof.

55. (Original) A method for detecting the presence or concentration of an analyte in a sample, said method comprising:

a) exposing the sample to an indicator macromolecule, said macromolecule comprising a copolymer of:

i) one or more indicator component monomers, the molecules of which are capable of exhibiting an excimer effect when suitably oriented with respect to each other, and which are also capable of detecting the presence or concentration of an analyte; and

ii) one or more other monomers;

such that the resulting macromolecule exhibits said excimer effect, and wherein the indicator macromolecule has a detectable quality that changes in a concentration-dependent manner when said macromolecule is exposed to said analyte; and

b) measuring any change in said detectable quality to thereby determine the presence or concentration of said analyte in said sample.

56. (Original) The method of claim 55, wherein the excimer effect does not substantially change in r sponse to changes in the presence or concentration of the analyte.

57. (Original) The method of claim 56, wherein

i) the molar ratio of other monomer:indicator component momomer is from about 2:1 to about 15:1,

ii) the indicator component monomer comprises an N-(*o*-boronobenzyl)amino]methyl]anthracene derivative, and

iii) the other monomer comprises [3-(methacryloylamino)propyl]trimethylammonium chloride.

58. (Original) The method of claim 55, wherein the indicator component monomer is selected from the group consisting of a lanthanide chelate and a polyaromatic hydrocarbon.

59. (Currently amended) The method of claim 57, wherein the indicator component monomer is selected from the group consisting of

9-[[N-methacryloylaminopropyl-N-(*o*-boronobenzyl)amino]-methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)-ethylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]-anthracene; ~~and~~

9,10-bis[N-(2-boronobenzyl)-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9-[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]-10-[N-(2-boronobenzyl)-N-[2-(2-hydroxyethoxy)ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]methyl]anthracene;

9,10-bis[N-(2-boronobenzyl)-N-[3-(methacrylamido)-propylamino]methyl]anthracene;

9-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]-10-[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-hydroxyethoxy)-ethylamino]methyl]anthracene;

9,10-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[2-(2-methacroyloxyethoxy)ethylamino]methyl]anthracene;

~~N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;~~

~~α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;~~

and salts or derivatives thereof.

60. (New) The indicator macromolecule of claim 1, wherein the indicator component monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

61. (New) The method of claim 14, wherein the indicator component monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

62. (New) The method of claim 27, wherein the indicator component monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

63. (New) The macromolecule of claim 41, wherein the excimer forming monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

64. (New) The method of claim 48, wherein the excimer forming monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

65. (New) The method of claim 55, wherein the indicator component monomer is selected from the group consisting of:

N-[3-(methacrylamido)propyl]-3,4-dihydroxy-9,10-dioxo-2-anthracenesulfonamide;

α,α'-bis[N-[2-(5,5-dimethyl-[1,3,2]dioxaborinan-2-yl)benzyl]-N-[3-(methacrylamido)propylamino]-1,4-xylene;

and salts or derivatives thereof.

REMARKS

The present amendment is submitt d in order to correct the form of several allowed claims.

First, claims 4, 17, 30, 47, 54 and 59 are amended to delete the last two monomers recited in each claim. That is being requested because each of those claims depends from a claim (claims 3, 16, 29, 45, 52 and 57, respectively) that specifies that the monomer "comprises an N-(*o*-boronobenzyl)aminomethyl-anthracene derivative." Upon review of the allowed claims, it was realized that the last two monomers recited in the claims noted above may not be N-(*o*-boronobenzyl)aminomethylanthracene derivatives. Thus, in order to assure proper claim form, those monomers are canceled from claims 4, 17, 30, 47, 54 and 59, and re-presented in new claims 60-65, which have the proper dependency.

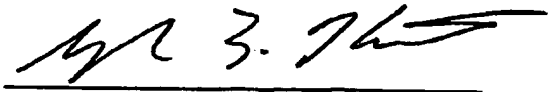
Second, claims 36 and 37 are requested to be amended to be consistent in scope with claims 10 and 11, and 23 and 24.

The foregoing amendments require no additional search or examination. If the amendment is entered, claims 4, 17, 30, 47, 54, and 59-65 will be of the same scope as the current claims. Moreover, the list of analytes recited in amended claim 36 is the same as in claims 10 and 23. Moreover, the claims amended and added herein are patentable because they are of the same scope as previously-allowed claims. The amendment was not presented

earlier because the formal matters sought to be corrected were discovered subsequent to the mailing of the Notice of Allowance.

Entry of the present amendment is respectfully requested.

Respectfully submitted,



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